Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L15	9	(("6904191") or ("6828887") or ("6510275") or ("6658179") or ("6580858") or ("6379989") or ("6567448") or ("6054335") or ("6177800")).PN.	US-PGPUB; USPAT	OR	OFF	2005/06/08 10:34
L17	210	(thermal near2 actuator) same width	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/06/08 10:35

| L18 | 113 | (US-20010017358-$ or
US-20010050232-$ or
US-20020011758-$ or
US-20020164123-$ or
US-20020174891-$ or
US-20020190603-$ or
US-20030011254-$ or
US-20030029705-$ or
US-20030053231-$ or
US-20030086641-$ or
US-20030098612-$ or
US-20030121260-$ or
US-20030132090-$ or
US-20030132822-$ or
US-20030160539-$ or
US-20030210115-$ or
US-20040027029-$ or
US-20040032000-$ or
US-20040085608-$ or
US-20040114856-$ or
US-20040118481-$ or
US-20040126080-$ or
US-20040126081-$ or
US-20040184709-$ or
US-20040184710-$ or
US-20040184720-$).did. or
(US-20040184760-$ or
US-20040189142-$ or
US-20040196522-$ or
US-20050011191-$ or
US-20050031252-$ or
US-20050031253-$ or
US-20050031288-$).did. or
(US-4887100-$ or US-5024500-$
or US-5364497-$ or US-5583290-$
or US-5862003-$ or US-5870518-$
or US-5909078-$ or US-5955817-$
or US-5962949-$ or US-5994816-$
or US-5998906-$ or US-6023121-$
or US-6032532-$ or US-6114794-$
or US-6124663-$ or US-6133670-$
or US-6134207-$ or US-6137206-$
or US-6164837-$ or US-6210046-$
or US-6218762-$ or US-6236139-$
or US-6253011-$ or US-6255757-$
or US-6262512-$ or
US-6275320-$).did. or
(US-6291922-$ or US-6303885-$
or US-6308631-$ or US-6310419-$
or US-6324748-$ or US-6333583-$
or US-6338249-$ or US-6351580-$
or US-6360033-$ or US-6360539-$
or US-6363183-$ or US-6367251-$
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or US-6388359-$ or US-6404969-$
or US-6407478-$ or US-6422011-$
or US-6428173-$ or US-6487330-$
or US-6580868-$ or US-6590313-$
or US-6596147-$ or US-6628039-$
or US-6658179-$ or US-6661962-$ | US-PGPUB;
USPAT;
EPO;
DERWENT | OR | ON | 2005/06/08 10:35 |

L19	198	L17 not L18	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/06/08 10:35
L20	1	2005-210748.NRAN.	DERWENT	OR	ON	2005/06/08 10:41
L21	1	2005-210744.NRAN.	DERWENT	OR	ON	2005/06/08 10:41
L22	1	2005-210744.NRAN.	DERWENT	OR	ON	2005/06/08 10:42
L23	103	(thermal with actuator) and (beam with spacing)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/06/08 10:43

| L24 | 103 | (US-20030086641-$ or US-20040032000-$ or US-20010050232-$ or US-20020011758-$ or US-20020164123-$ or US-20030053231-$ or US-20030132822-$ or US-20030132090-$ or US-20030210115-$ or US-20040027029-$ or US-20040114856-$ or US-20040118481-$ or US-20040184760-$ or US-20040184720-$ or US-20040184710-$ or US-20040184709-$ or US-20050031288-$ or US-20050031253-$ or US-20050031252-$ or US-20030121260-$ or US-20010017358-$ or US-20020190603-$ or US-20030011254-$ or US-20030160539-$ or US-20040085608-$ or US-20040126081-$).did. or (US-20040126080-$ or US-20040189142-$ or US-20040196522-$ or US-20050011191-$ or US-20020174891-$ or US-20030029705-$ or US-20030098612-$).did. or (US-5909078-$ or US-5994816-$ or US-6023121-$ or US-6114794-$ or US-6255757-$ or US-6324748-$ or US-6360539-$ or US-6828887-$ or US-5024500-$ or US-6303885-$ or US-6487330-$ or US-5998906-$ or US-6124663-$ or US-6134207-$ or US-6218762-$ or US-6236139-$ or US-6275320-$ or US-6338249-$ or US-6351580-$ or US-6360033-$ or US-6363183-$ or US-6367252-$ or US-5955817-$ or US-5962949-$ or US-6367251-$ or US-6388359-$).did. or (US-6404969-$ or US-6428173-$ or US-6504968-$ or US-6590313-$ or US-6596147-$ or US-6658179-$ or US-6754243-$ or US-6771158-$ or US-6807356-$ or US-6836584-$ or US-6853765-$ or US-4887100-$ or US-5364497-$ or US-5583290-$ or US-6032532-$ or US-5870518-$ or US-6164837-$ or US-6310419-$ or US-6386507-$ or US-6422011-$ or US-6675578-$ or US-6708492-$ or US-6133670-$ or US-6137206-$ or US-5862003-$ or US-6291922-$ | US-PGPUB; USPAT; EPO; DERWENT | OR | ON | 2005/06/08 10:43 |

L25	21	L23 and L24	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/06/08 10:43
L26	3	(thermal with actuator) and (beam with resistance with width)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/06/08 10:43
L27	394	(beam with resistance with width)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/06/08 10:43
L28	360	(optical with switch$2) and substrate and (beam or waveguide or fiber) and (thermal with actuator)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/06/08 10:43
L29	1176	(substrate same (beam or waveguide or fiber)) and (thermal with actuator)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/06/08 10:43
L30	869	L29 not L28	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/06/08 10:43
S1	15	(("5706041") or ("5851412") or ("6362512") or ("6379989") or ("6002507") or ("6014240") or ("5909078") or ("5994816") or ("6023121") or ("6114794") or ("6255757") or ("6324748") or ("6360539") or ("20030134445") or ("20030086641")).PN.	US-PGPUB; USPAT	OR	OFF	2005/03/07 09:21
S2	1	("6658179").PN.	US-PGPUB; USPAT	OR	OFF	2005/03/07 09:40
S3	9	(("6828171") or ("6467879") or ("6479311") or ("6479315") or ("6506620") or ("6580858") or ("6510275") or ("6828887") or ("6661070")).PN.	US-PGPUB; USPAT	OR	OFF	2005/03/07 10:41

S4	11	(("5024500") or ("6487330") or ("6842558") or ("6201629") or ("5969848") or ("6033670") or ("5502781") or ("6072924") or ("6303885") or ("6526198") or ("20040032000")).PN.	US-PGPUB; USPAT	OR	OFF	2005/03/07 10:42
S5	333	(optical with switch$2) and substrate and (beam or waveguide or fiber) and (thermal with actuator)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/03/07 11:44
S6	6	("5867302" | "5955817" | "5962949" | "5994816" | "6023121" | "6114794").PN. OR ("6367252").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2005/03/07 10:57
S7	1	2002-548530.NRAN.	DERWENT	OR	ON	2005/03/07 11:03
S8	0	("2004/0184760").URPN.	USPAT	OR	ON	2005/03/07 11:36
S9	0	("2004/0118481").URPN.	USPAT	OR	ON	2005/03/07 11:37
S10	1	("2004/0114856").URPN.	USPAT	OR	ON	2005/03/07 11:37
S11	0	("2004/0184720").URPN.	USPAT	OR	ON	2005/03/07 11:37
S12	0	("2004/0184710").URPN.	USPAT	OR	ON	2005/03/07 11:37
S13	0	("2004/0184709").URPN.	USPAT	OR	ON	2005/03/07 11:37
S14	0	("6828887").URPN.	USPAT	OR	ON	2005/03/07 11:39
S15	0	("6853765").URPN.	USPAT	OR	ON	2005/03/07 11:40
S16	3	("5909078" | "6168395" | "6303885").PN. OR ("6828887"). URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2005/03/07 11:41
S17	6	("20020102061" | "4946236" | "5175776" | "5446811" | "6360036" | "6388359").PN. OR ("6853765").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2005/03/07 11:41
S18	0	("2005/0031288").URPN.	USPAT	OR	ON	2005/03/07 11:43
S19	0	("2005/0031253").URPN.	USPAT	OR	ON	2005/03/07 11:43
S20	0	("2005/0031252").URPN.	USPAT	OR	ON	2005/03/07 11:43
S21	1461	substrate and (beam or waveguide or fiber) and (thermal with actuator)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/03/07 17:18
S22	1099	(substrate same (beam or waveguide or fiber)) and (thermal with actuator)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/03/07 16:08

S23	812	S22 not S5	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/03/07 11:45
S24	19	("4624741" | "4893509" | "5130276").PN. OR ("5364497"). URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2005/03/07 12:05
S25	1	1997-169577.NRAN.	DERWENT	OR	ON	2005/03/07 16:00
S26	35	("3836225" | "4688885" | "5080458" | "5181214" | "5214727" | "5457765" | "5483608" | "5553182" | "5602955" | "5606635" | "5699463").PN. OR ("5870518"). URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2005/03/07 16:02
S27	70	(substrate same (beam or waveguide or fiber)) and (thermal with actuator).ti.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/03/07 16:09
S28	333	(optical with switch$2) and substrate and (beam or waveguide or fiber) and (thermal with actuator)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/03/07 16:09
S29	57	S27 not S28	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/03/07 16:09

S30	75	("1258368" | "1658669" | "2466703" | "3213318" | "3280550" | "3304446" | "3609593" | "4806815" | "5179499" | "5180940" | "5184269" | "5191251" | "5261747" | "5296775" | "5309056" | "5355712" | "5367584" | "5441343" | "5467068" | "5475318" | "5483799" | "5536988" | "5558304" | "5600174" | "5602955" | "5606635" | "5629665" | "5644177" | "5659285" | "5722989" | "5796152" | "5813441" | "5862003" | "5881198" | "5903078" | "5909078").PN. OR ("6137206").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2005/03/07 16:14
S31	7	("5214735" | "5677975" | "5835652" | "6085014" | "6249636" | "6374022" | "6539161").PN. OR ("6661962").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2005/03/07 16:42
S32	1462	substrate and (beam or waveguide or fiber) and (thermal with actuator)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/03/07 17:19
S33	1100	(substrate same (beam or waveguide or fiber)) and (thermal with actuator)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/03/08 08:15
S34	813	S33 not S28	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/03/07 17:19
S35	622	S32 not (S34 or (silverbrook.in.))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/03/07 17:19

| S36 | 104 | (US-20030086641-$ or
US-20040032000-$ or
US-20010050232-$ or
US-20020011758-$ or
US-20020164123-$ or
US-20030053231-$ or
US-20030132822-$ or
US-20030132090-$ or
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or US-6504968-$ or US-6590313-$
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or US-6133670-$ or US-6137206-$
or US-5862003-$ or US-6291922-$
or US-6407478-$).did. or
(US-6828039-$ or US-6210046-$
or US-6253011-$ or US-6262512-$ | US-PGPUB;
USPAT;
EPO;
DERWENT | OR | ON | 2005/03/07 17:19 |

S37	288	S35 not (S36 or S28)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/03/07 17:20
S38	2	("2003/0029705").URPN.	USPAT	OR	ON	2005/03/07 17:28
S39	12	("20010008357" | "4806815" | "5796152" | "5909078" | "5994816" | "6211598" | "6236139" | "6255757" | "6291922" | "6367251" | "6386507" | "6590313").PN. OR ("6734597").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2005/03/07 17:31
S40	2	("6310419" | "6407478").PN. OR ("6753582").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2005/03/07 17:32
S41	6	("20020114058" | "5909078" | "5963367" | "6467761" | "6672795" | "6679055").PN. OR ("6806991").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2005/03/07 17:33
S42	0	(substrate same (beam or waveguide or fiber)) and (ladder with thermal with actuator)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/03/08 08:15
S43	12	("20010008357" | "4806815" | "5796152" | "5909078" | "5994816" | "6211598" | "6236139" | "6255757" | "6291922" | "6367251" | "6386507" | "6590313").PN. OR ("6734597").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2005/03/08 08:35
S44	0	("WO199098").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/03/08 11:32
S45	1	"WO01/99098"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/03/08 08:38
S46	0	"01/99098"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/03/08 08:38

S47	0	"$01/99098"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/03/08 08:38
S48	387	(beam with resistance with width)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/03/08 14:08
S49	3	(thermal with actuator) and (beam with resistance with width)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/03/08 14:11
S50	99	(thermal with actuator) and (beam with spacing)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/03/08 14:11

| S51 | 113 | (US-20030086641-$ or US-20040032000-$ or US-20010050232-$ or US-20020011758-$ or US-20020164123-$ or US-20030053231-$ or US-20030132822-$ or US-20030132090-$ or US-20030210115-$ or US-20040027029-$ or US-20040114856-$ or US-20040118481-$ or US-20040184760-$ or US-20040184720-$ or US-20040184710-$ or US-20040184709-$ or US-20050031288-$ or US-20050031253-$ or US-20050031252-$ or US-20030121260-$ or US-20010017358-$ or US-20020190603-$ or US-20030011254-$ or US-20030160539-$ or US-20040085608-$ or US-20040126081-$).did. or (US-20040126080-$ or US-20040189142-$ or US-20040196522-$ or US-20050011191-$ or US-20020174891-$ or US-20030029705-$ or US-20030098612-$).did. or (US-5909078-$ or US-5994816-$ or US-6023121-$ or US-6114794-$ or US-6255757-$ or US-6324748-$ or US-6360539-$ or US-6828887-$ or US-5024500-$ or US-6303885-$ or US-6487330-$ or US-5998906-$ or US-6124663-$ or US-6134207-$ or US-6218762-$ or US-6236139-$ or US-6275320-$ or US-6338249-$ or US-6351580-$ or US-6360033-$ or US-6363183-$ or US-6367252-$ or US-5955817-$ or US-5962949-$ or US-6367251-$ or US-6388359-$).did. or (US-6404969-$ or US-6428173-$ or US-6504968-$ or US-6590313-$ or US-6596147-$ or US-6658179-$ or US-6754243-$ or US-6771158-$ or US-6807356-$ or US-6836584-$ or US-6853765-$ or US-4887100-$ or US-5364497-$ or US-5583290-$ or US-6032532-$ or US-5870518-$ or US-6164837-$ or US-6310419-$ or US-6386507-$ or US-6422011-$ or US-6675578-$ or US-6708492-$ or US-6133670-$ or US-6137206-$ or US-5862003-$ or US-6291922-$ | US-PGPUB; USPAT; EPO; DERWENT | OR | ON | 2005/03/08 14:12 |

| S52 | 24 | S50 and S51 | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2005/03/08 14:12 |

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Advanced Packaging, IEEE Transactions on [see also Components, Packaging and Ma
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Volume 26, Issue 3, Aug. 2003 Page(s):268 - 276

AbstractPlus | References | Full Text: PDF(2372 KB)   **IEEE JNL**

☐   2. **New opportunities for microactuators**
Fujita, H.; Gabriel, K.J.;
Solid-State Sensors and Actuators, 1991. Digest of Technical Papers, TRANSDUCER!
International Conference on
24-27 June 1991 Page(s):14 - 20

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Huja, M.; Husak, M.;
Information Technology: Coding and Computing, 2001. Proceedings. International Con
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Gallois-Pichonat, E.; Jeannot, J.-C.; de Labachelerie, M.;
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Volume 2, 15-18 Oct. 2001 Page(s):787 - 790 vol.2

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☐   5. **Thermal actuators used for a micro-optical bench: application for a tunable Fabr**
Pichonat-Gallois, E.; de Labachelerie, M.;
TRANSDUCERS, Solid-State Sensors, Actuators and Microsystems, 12th International
2003
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THERMAL ACTUATOR

1986-10-31   IPCOM000025616D   Englisl

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two strips of metal whose coefficients of thermal expansion are
change in temperature causes the two metals to change in leng
and in an amount proportional to the ...

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structure for effecting a substantial increase in semiconductor d
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Multilayer Substrate Repair Method

1974-02-01   IPCOM000080718D   Englisl

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multilayer solder pin interconnected substrates having semicon⟨
mounted thereon. This can be accomplished by providing a pas:
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